Italian Botanist 14: 99–118 (2022)
doi: 10.3897/italianbotanist.14.97758
https://italianbotanist.pensoft.net

RESEARCH ARTICLE

Italian Botanist
Published by Società Botanica Italiana

Notulae to the Italian alien vascular flora: 14

Gabriele Galasso[1], Gianniantonio Domina[2], Sebastiano Andreatta[3], Carlo Argenti[4], Giovanni Astuti[5], Giovanni Bacaro[6], Gianluigi Bacchetta[7], Simonetta Bagella[8], Enrico Banfi[1], Davide Barberis[9], Fabrizio Bartolucci[10], Liliana Bernardo[11], Gianmaria Bonari[12], Giuseppe Brundu[13], Giovanni Buccomino[14], Giacomo Calvia[7], Laura Cancellieri[15], Alberto Capuano[16], Laura Celesti-Grapow[17], Fabio Conti[10], Alba Cuena-Lombraña[7], Francesco S. D'Amico[18], Giuseppe De Fine[19], Leopoldo de Simone[20], Emanuele Del Guacchio[21], Francesca Emili[17], Emanuele Fanfarillo[20], Simonetta Fascetti[22], Tiberio Fiaschi[20], Mauro Fois[7], Paola Fortini[23], Rodolfo Gentili[24], Marco Giardini[25], Amara N. Hussain[23], Duilio Iamonico[26], Valentina L.A. Laface[27], Andrea Lallai[7], Lorenzo Lazzaro[28], Angela P. Lecis[29], Eleonora Ligato[27], Gianfranco Loi[30], Michele Lonati[9], Vanessa Lozano[13], Simona Maccherini[20], Andrea Mainetti[31], Francesco Mascia[7], Giacomo Mei[32], Flavio Menini[33], Marco Merli[34], Antonio Montesano[22], Michele Mugnai[28], Carmelo M. Musarella[27], Ginevra Nota[9], Nicola Olivieri[35], Nicodemo G. Passalacqua[36], Lorenzo Pinzani[37], Alice Pisano[38], Marco Pittarello[39], Lina Podda[7], Giandomenico Posillipo[27], Giovanna Potenza[22], Massimiliano Probo[40], Filippo Prosser[41], Lara A. Quaglini[24], Simone Ravetto Enri[9], Giovanni Rivieccio[8], Francesco Roma-Marzio[5], Leonardo Rosati[22], Alberto Selvaggi[42], Adriano Soldano[43], Adriano Stinca[44], Stefano Tasinazzo[45], Salvatore Tassone[27], Massimo Terzi[46], Roberta Vallariello[21], Roberta Vangelisti[5], Filip Verloove[47], Lorenzo Lastrucci[48]

1 *Sezione di Botanica, Museo di Storia Naturale di Milano, Corso Venezia 55, 20121 Milano, Italy* **2** *Dipartimento di Scienze Agrarie, Alimentari e Forestali (SAAF), Università di Palermo, Viale delle Scienze, edificio 4, 90128 Palermo, Italy* **3** *Museo Civico di Storia Naturale di Verona, Piazza Arsenale 8, 37126 Verona, Italy* **4** *Via E. Pietriboni 7, 32100 Belluno, Italy* **5** *Sistema Museale di Ateneo, Università di Pisa, Via L. Ghini 13, 56126 Pisa, Italy* **6** *Dipartimento di Scienze della Vita, Università di Trieste, Via L. Giorgieri 10, 34127 Trieste, Italy* **7** *Centro Conservazione Biodiversità (CCB), Dipartimento di Scienze della Vita e dell'Ambiente (DISVA), Università di Cagliari, Viale Sant'Ignazio da Laconi 13, 09123 Cagliari, Italy* **8** *Dipartimento di Scienze Chimiche, Fisiche, Matematiche e Naturali, Università di Sassari, Via Vienna 2, 07100 Sassari, Italy* **9** *Dipartimento di Scienze Agrarie, Forestali e Alimentari (DISAFA), Università di Torino, Largo P. Braccini 2, 10095 Grugliasco (Torino), Italy* **10** *Centro Ricerche Floristiche dell'Appennino (Università di Camerino - Parco Nazionale del Gran Sasso e Monti della Laga), San Colombo, 67021 Barisciano (L'Aquila), Italy* **11** *Dipartimento di Biologia, Ecologia e Scienze della Terra (DIBEST), Università della Calabria, 87036 Rende, fraz. Arcavacata di Rende (Cosenza), Italy* **12** *Facoltà di Scienze e Tecnologie, Libera Università di Bolzano, Piazza Università 5, 39100 Bolzano, Italy* **13** *Dipartimento di Agraria, Università di Sassari, Viale Italia 39/a, 07100 Sassari, Italy* **14** *Via Sagunto 20, 00174 Roma, Italy* **15** *Dipartimento di Scienze Agrarie e Forestali (DAFNE), Università della Tuscia,*

Copyright *Gabriele Galasso et al.* This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Via San Camillo de Lellis snc, 01100 Viterbo, Italy **16** *Via G. Caloprese 10, 88100 Catanzaro, Italy* **17** *Dipartimento di Biologia Ambientale, Sapienza Università di Roma, Piazzale A. Moro 5, 00197 Roma, Italy* **18** *Dipartimento di Biologia, Università di Bari Aldo Moro, Via E. Orabona 4, 70125 Bari, Italy* **19** *Istituto Professionale Statale per l'Industria e l'Artigianato A.M. Barlacchi, Via G. Carducci, 88900 Crotone, Italy* **20** *Dipartimento di Scienze della Vita, Università di Siena, Via P.A. Mattioli 4, 53100 Siena, Italy* **21** *Dipartimento di Biologia, Università di Napoli Federico II, c/o Orto Botanico, Via Foria 223, 80139 Napoli, Italy* **22** *Scuola di Scienze Agrarie, Forestali, Alimentari e Ambientali, Università della Basilicata, Via dell'Ateneo Lucano 10, 85100 Potenza, Italy* **23** *Dipartimento di Bioscienze e Territorio, Università del Molise, Contrada Fonte Lappone, 86090 Pesche (Isernia), Italy* **24** *Dipartimento di Scienze dell'Ambiente e della Terra, Università di Milano-Bicocca, Piazza della Scienza 1, 20126 Milano, Italy* **25** *Istituto d'Istruzione Superiore Via Roma 298, Via E. Morante, 00012 Guidonia Montecelio (Roma), Italy* **26** *Centro di Ricerche e Servizi per l'Innovazione Tecnologica e Sostenibile (CeRSITeS), Sapienza Università di Roma, Viale XXIV Maggio 7, 04100 Latina, Italy* **27** *Dipartimento di Agraria, Università Mediterranea di Reggio Calabria, Località Feo di Vito snc, 89122 Reggio Calabria, Italy* **28** *Dipartimento di Biologia, Università di Firenze, Via G. La Pira 4, 50121 Firenze, Italy* **29** *Stazione di Uta, Corpo Forestale e di Vigilanza Ambientale (CFVA), Sesta Strada Ovest, 09068 Uta, fraz. Macchiareddu (Cagliari), Italy* **30** *Via San Francesco 7, 09050 Pula, fraz. Santa Margherita di Pula (Cagliari), Italy* **31** *Ufficio Conservazione Botanico-Forestale, Parco Nazionale Gran Paradiso, Fraz. Valnontey 44, 11012 Cogne (Aosta), Italy* **32** *Dipartimento di Scienze Agroambientali e Territoriali, Università di Bari Aldo Moro, Via G. Amendola 165/a, 70126 Bari, Italy* **33** *Via D. Ricci 4, 37042 Caldiero (Verona), Italy* **34** *Via dei Caputéi 7, 38070 Stenico, fraz. Sclemo (Trento), Italy* **35** *Via Maestri del Lavoro 40, 64100 Teramo, Italy* **36** *Museo di Storia Naturale della Calabria ed Orto Botanico, Università della Calabria, Via A. Savinio, 87036 Rende, fraz. Arcavacata di Rende (Cosenza), Italy* **37** *Unità di Botanica, Dipartimento di Biologia, Università di Pisa, Via Derna 1, 56126 Pisa, Italy* **38** *Via Trieste 27, 09010 Masainas (Sud Sardegna), Italy* **39** *Dipartimento di Scienze Veterinarie, Università di Torino, Largo P. Braccini 2, 10095 Grugliasco (Torino), Italy* **40** *Grazing Systems, Agroscope, Route de la Tioleyre 4, 1725 Posieux, Switzerland* **41** *Fondazione Museo Civico di Rovereto, Largo Santa Caterina 41, 38068 Rovereto (Trento), Italy* **42** *Istituto per le Piante da Legno e l'Ambiente (IPLA), Corso Casale 476, 10132 Torino, Italy* **43** *Largo Brigata Cagliari 6, 13100 Vercelli, Italy* **44** *Dipartimento di Scienze e Tecnologie Ambientali, Biologiche e Farmaceutiche, Università della Campania Luigi Vanvitelli, Via A. Vivaldi 43, 81100 Caserta, Italy* **45** *Via V. Gioberti 6, 36100 Vicenza, Italy* **46** *Istituto di Bioscienze e Biorisorse, Consiglio Nazionale delle Ricerche (CNR-IBBR), Via G. Amendola 165/a, 70126 Bari, Italy* **47** *Meise Botanic Garden, 38 Nieuwelaan, B-1860 Meise, Belgium* **48** *Sistema Museale di Ateneo, Università di Firenze, Via G. La Pira 4, 50121 Firenze, Italy*

Corresponding author: Gabriele Galasso (gabriele.galasso@comune.milano.it)

Academic editor: Lorenzo Peruzzi | Received 19 November 2022 | Accepted 28 November 2022 | Published 6 December 2022

Citation: Galasso G, Domina G, Andreatta S, Argenti C, Astuti G, Bacaro G, Bacchetta G, Bagella S, Banfi E, Barberis D, Bartolucci F, Bernardo L, Bonari G, Brundu G, Buccomino G, Calvia G, Cancellieri L, Capuano A, Celesti-Grapow L, Conti F, Cuena-Lombraña A, D'Amico FS, De Fine G, de Simone L, Del Guacchio E, Emili F, Fanfarillo E, Fascetti S, Fiaschi T, Fois M, Fortini P, Gentili R, Giardini M, Hussain AN, Iamonico D, Laface VLA, Lallai A, Lazzaro L, Lecis AP, Ligato E, Loi G, Lonati M, Lozano V, Maccherini S, Mainetti A, Mascia F, Mei G, Menini F, Merli M, Montesano A, Mugnai M, Musarella CM, Nota G, Olivieri N, Passalacqua NG, Pinzani L, Pisano A, Pittarello M, Podda L, Posillipo G, Potenza G, Probo M, Prosser F, Quaglini LA, Ravetto Enri S, Rivieccio G, Roma-Marzio F, Rosati L, Selvaggi A, Soldano A, Stinca A, Tasinazzo S, Tassone S, Terzi M, Vallariello R, Vangelisti R, Verloove F, Lastrucci L (2022) Notulae to the Italian alien vascular flora: 14. Italian Botanist 14: 99–118. https://doi.org/10.3897/italianbotanist.14.97758

Abstract

In this contribution, new data concerning the distribution of vascular flora alien to Italy are presented. It includes new records, confirmations, and status changes for Italy or for Italian administrative regions. Nomenclatural and distribution updates, published elsewhere, and corrections are provided as Suppl. material 1.

Keywords

Alien species, floristic data, Italy, nomenclature

How to contribute

The text for the new records should be submitted electronically to Lorenzo Lastrucci (lorenzo.lastrucci@unifi.it). The corresponding specimen along with its scan or photograph has to be sent to FI Herbarium: Museo di Storia Naturale (Botanica), Sistema Museale di Ateneo, Via G. La Pira 4, 50121 Firenze (Italy). Those texts concerning nomenclatural novelties (typifications only for accepted names), exclusions, and confirmations should be submitted electronically to Gabriele Galasso (gabriele.galasso@comune.milano.it). Each text should be within 1,000 characters (spaces included).

Floristic records

Abies nordmanniana (Steven) Spach subsp. *nordmanniana* (Pinaceae)

+ (CAS) **TAA**: Trento (Trento), fraz. Meano (WGS84: 46.133649°N, 11.124639°E), radura boschiva di un bosco termofilo a roverella, 455 m, 17 October 2021, *G. Bonari* (FI). – Casual alien species new for the flora of Trentino-Alto Adige.

This species occurs with an individual in a thermophilous oak forest of Adige Valley. The other herbarium specimens from bottom-valley sites testify for the use of this species in afforestation since many years and support the limited spread of this species at sites [e.g., Ala (Trento), fraz. Serravalle all'Adige, sentiero per loc. Fortini (WGS84: 45.815032°N, 11.018794°E), esemplari sparsi (piantati) nel bosco di pino nero, 400 m, 7 January 2005, leg. *F. Prosser* sub *Abies cephalonica*, rev. *F. Prosser* 2021 (ROV)]. Furthermore, this species is cultivated as Christmas tree in Val Sugana (G. Bonari pers. obs.) and sometimes planted in gardens (e.g., in Calamento valley, G. Bonari pers. obs.). This species can be distinguished from similar ones for having non-resinous buds, glabrous branches and non-prickly needles.

G. Bonari, F. Prosser

Acacia dealbata Link (Fabaceae)

+ (NAT) **UMB**: Orvieto (Terni), loc. Tordimonte, lungo la strada SP98 (WGS84: 42.682246°N, 12.193114°E), margine stradale, 314 m, 20 February 2022, leg. *M.*

Mugnai, M. Vinci, det. *M. Mugnai, L. Lazzaro, G. Ferretti* (FI). – Naturalized alien species new for the flora of Umbria.

Several adult individuals along the provincial road originated from seeds produced by nearby trees. We observed a substantial spreading of the species with individuals at different growth stages occurring along the road.

M. Mugnai, L. Lazzaro

Acacia pycnantha Benth. (Fabaceae)

+ (INV) **SAR**. – Status change from naturalized to invasive alien for the flora of Sardegna.

Acacia pycnantha was commonly used for afforestation and reforestation in Sardegna. Although less common in coastal areas, this species is showing similar invasive behavior to *A. saligna* (Labill.) H.L.Wendl. in several inland areas (up to ca. 500 m a.s.l.) but also in a few sites along the coast (e.g., at the edges of a *Pinus* plantation, WGS84: 40.466866°N, 9.775060°E).

M. Fois, A. Cuena-Lombraña, G. Brundu, V. Lozano

Achillea filipendulina Lam. (Asteraceae)

+ (CAS) **SAR**: Capoterra (Cagliari), Rio Santa Lucia (WGS84: 39.1702743°N, 8.9973075°E), banco fluviale, 3 m, 5 July 2022, *A.P. Lecis, L. Podda, A. Lallai* (FI, CAG). – Casual alien species new for the flora of Sardegna.

A group of four flowering individuals was found along the riverbank, probably originated from seeds of plants growing nearby.

A.P. Lecis, L. Podda, A. Lallai

Amaranthus viridis L. (Amaranthaceae)

+ (CAS) **MOL**: Isernia (Isernia), Via J.F. Kennedy 92 (WGS84: 41.59408°N, 14.23302°E), margine stradale, 463 m, 29 July 2021, leg. *A. Hussain*, det. *A. Hussain, P. Fortini, D. Iamonico* (FI, IS No. IS-1003, RO). – Casual alien species new for the flora of Molise.

A few individuals were found.

A.N. Hussain, P. Fortini, D. Iamonico

Anethum graveolens L. (Apiaceae)

+ (CAS) **PUG**: Rocchetta Sant'Antonio (Foggia), loc. Santuario della Madonna del Pozzo (WGS84: 41.091227°N, 15.444830°E), margine stradale/coltivi, 452 m, 6 July 2022, *G. Buccomino* (FI). – Casual alien species new for the flora of Puglia.

G. Buccomino

***Bignonia capreolata* L. (Bignoniaceae)**

+ (CAS) **ITALIA** (**LOM**): Milano (Milano), piazza d'Armi, tra Via delle Forze Armate, Via della Rovere e Via G. Mazzarino (WGS84: 45.462558°N, 9.118055°E), margine incolto, 124 m, no exp., 24 May 2022, leg. *G. Galasso, R. Gentili, L.A. Quaglini*, det. *G. Galasso* (FI, MSNM barcode MSNM51826). – Casual alien species new for the flora of Italy (Lombardia).

Bignonia capreolata is a species native to SE-North America (Britton and Brown 1913). One sterile individual was found.

G. Galasso, R. Gentili, L.A. Quaglini

***Broussonetia papyrifera* (L.) Vent. (Moraceae)**

+ (INV) **LAZ**. – Status change from naturalized to invasive alien for the flora of Lazio.

In Ferentino (Frosinone), we found several sites where this species is widespread and colonizes ruderal areas and abandoned fields, even forming dense thickets (e.g., WGS84: 41.679429°N, 13.256788°E; 41.704276°N, 13.265966°E; 41.689602°N, 13.256781°E). We therefore propose its status change from naturalized to invasive alien.

E. Fanfarillo, T. Fiaschi

***Campanula portenschlagiana* Schult. (Campanulaceae)**

+ (CAS) **LAZ**: Jenne (Roma), centro storico (WGS84: 41.886577°N, 13.168036°E), vecchi muri, 815 m, 15 November 2021, leg. *L. Rosati*, det. *L. Rosati, L. Cancellieri* (FI). – Casual alien species new for the flora of Lazio.

L. Rosati, L. Cancellieri

***Cenchrus clandestinus* (Hochst. ex Chiov.) Morrone (Poaceae)**

+ (CAS) **ITALIA** (**CAL**): Catanzaro (Catanzaro), Parco della Biodiversità Mediterranea (WGS84: 38.922443°N, 16.580986°E), muro di contenimento in cemento da cui fuoriesce una perdita d'acqua, 404 m, 18 March 2022, *A. Capuano* (FI). – Casual alien species new for the flora of Italy (Calabria).

This species, identified according to Maire (1952) and Wipff (2003), has been used to create a small lawn in a nearby area. *Cenchrus clandestinus* is native to humid highlands of central and eastern Africa. It has been introduced as pasture and ornamental grass to temperate and subtropical regions of America and Australia, where it shows adaptations to different environmental conditions (Fraser et al. 2017). It usually reproduces by vegetative propagation by rhizomes (Arango Gaviria et al. 2019).

A. Capuano

Centaurea diluta Aiton (Asteraceae)

+ (NAT) **PUG**: Gravina (Bari), agro di Gravina, al bordo del vulcanello (WGS84: 40.702861°N, 16.429033°E), incolto, 210 m, 27 April 2022, *M. Terzi, F.S. D'Amico* (FI). – Naturalized alien species new for the flora of Puglia.

Centaurea diluta is present along an uncultivated strip, near the border between Puglia and Basilicata. This species was also found close to the border on the Basilicata side (Galasso et al. 2021).

M. Terzi, F.S. D'Amico

Chloris gayana Kunth (Poaceae)

+ (CAS) **CAL**: Catanzaro (Catanzaro), Parco della Biodiversità Mediterranea (WGS84: 38.920250°N, 16.581116°E), pendio erboso incolto, 403 m, 16 February 2022, *A. Capuano* (FI). – Casual alien species new for the flora of Calabria.

The few observed individuals have been uprooted in order to prevent a future colonisation.

A. Capuano

Chrysanthemum morifolium (Ramat.) Hemsl. (Asteraceae)

+ (CAS) **ITALIA** (**VEN**): Verona (Verona), presso la città di Verona in Lungadige Cangrande, lungo la sponda dell'Adige, tra il fiume e l'argine murato (WGS84: 45.44243142°N, 10.98234527°E), sponda erbosa periodicamente inondata, un esemplare in fiore ben radicato nel terreno, 51 m, 15 December 2021, leg. *F. Menini*, det. *F. Menini, G. Galasso* (FI). – Casual alien species new for the flora of Italy (Veneto).

This species was reported as alien by several authors (Goiran 1900; Puccini 1950), but only cultivated or escaped within gardens (Galasso et al. 2018).

F. Menini, G. Galasso

Cornus sericea L. subsp. *sericea* (Cornaceae)

+ (CAS) **VEN**: Roana (Vicenza), fraz. Camporovere, imbocco sentiero boschivo per il Tanzerloch (WGS84: 45.882409°N, 11.475303°E), margine boschivo al limitare di prato da sfalcio, 1030 m, 24 August 2022, *S. Tasinazzo* (FI). – Casual alien species new for the flora of Veneto.

A surface of 2 m^2 was occupied by a clump of non blooming individuals, already observed in August 2021.

S. Tasinazzo

Dysphania pumilio (R.Br.) Mosyakin & Clemants (Amaranthaceae)

+ (NAT) **VEN**: Chioggia (Venezia), Ca' Lino (WGS84: 45.162913°N, 12.298620°E), orto, -1 m, 30 October 2021, *S. Tasinazzo* (FI); *ibidem*, Ca' Zadra (WGS84:

45.152445°N, 12.296484°E), coltivo, -1 m, 30 October 2021, *S. Tasinazzo* (*Herb. S. Tasinazzo*); *ibidem*, 26 September 2022, *S. Tasinazzo* (*Herb. S. Tasinazzo*). – Naturalized alien species new for the flora of Veneto.

S. Tasinazzo

***Ehrharta erecta* Lam. (Poaceae)**

+ (CAS) **CAL**: Catanzaro (Catanzaro), Parco della Biodiversità Mediterranea (WGS84: 38.918430°N, 16.580912°E), dentro alcune siepi e aiuole in posizione semiombreggiata, ca. 388 m, 10 February 2022, *A. Capuano* (FI); *ibidem*, Via Piave (WGS84: 38.913589°N, 16.585429°E), lungo il marciapiede, nelle aiuole sotto alcuni alberi e in un giardino incolto, 352 m, 2 August 2022, *A. Capuano* (FI). – Casual alien species new for the flora of Calabria.

Several individuals were observed.

A. Capuano

***Eragrostis pectinacea* (Michx.) Nees (Poaceae)**

+ (NAT) **CAL**: Santa Sofia d'Epiro (Cosenza), loc. Faudano, nei pressi del Fiume Crati (destra idrografica) (WGS84: 39.589711°N, 16.264669°E), fossato e ambiente umido a margine strada, 70 m, 17 July 2012, leg. *L. Bernardo, A. Soldano, D. Puntillo*, det. *F. Verloove* (FI, CLU No. 26304, *Herb. A. Soldano* No. 16014). – Naturalized alien species new for the flora of Calabria.

A. Soldano, L. Bernardo, F. Verloove

***Erythranthe guttata* (DC.) G.L.Nesom (Phrymaceae)**

+ (CAS) **VEN**: Zevio (Verona), loc. Ponte Perez, lungo la sponda destra del Fiume Adige (WGS84: 45.37996092°N, 11.13532127°E), greto ghiaioso/sabbioso del fiume, un esemplare in antesi, 27 m, 24 May 2022, *F. Menini* (FI); Belfiore (Verona), loc. Lorosi, lungo la sponda sinistra del Fiume Adige (WGS84: 45.37091748°N, 11.18414264°E), greto ghiaioso/sabbioso del fiume, 27 m, 24 June 2022, *F. Menini* (VER); Verona (Verona), loc. Porto San Pancrazio, lungo la sponda destra del Fiume Adige (WGS84: 45.42776403°N, 11.01548551°E), sponda melmosa del fiume, 46 m, 28 June 2022, *F. Menini* (VER). – Casual alien species new for the flora of Veneto.

F. Menini, S. Andreatta

***Eschscholzia californica* Cham. subsp. *californica* (Papaveraceae)**

+ (CAS) **BAS**: Lauria (Potenza), fraz. Pecorone (WGS84: 40.072333°N, 15.857557°E), bordo strada, 778 m, 18 June 2020, leg. *A. Montesano* (FI). – Casual alien species new for the flora of Basilicata.

A. Montesano, S. Fascetti, L. Rosati

***Fatoua villosa* (Thunb.) Nakai (Moraceae)**

+ (CAS) **ITALIA** (**SAR**): Pula (Cagliari), fraz. Santa Margherita di Pula (WGS84: 38.968344°N, 8.965075°E), aree marginali nei pressi di serre e vivai, 15 m, 17 June 2022, *G. Bacchetta, G. Loi, G. Calvia* (FI, CAG). – Casual alien species new for the flora of Italy (Sardegna).

Fatoua villosa is an annual herb native to East Asia, Pacific islands, and Australia (Zhekun and Gilbert 2003) and reported for Europe only in Corsica (Puddu et al. 2016). A few individuals have been observed.

G. Bacchetta, G. Loi, G. Calvia

***Graptopetalum paraguayense* (N.E.Br.) Walther subsp. *paraguayense* (Crassulaceae)**

+ (CAS) **LAZ**: Sant'Angelo Romano (Roma), Via Roma all'altezza del civico 82/a (WGS84: 42.036886°N, 12.714044°E), parete calcarea sul bordo della strada, 350 m, 18 January 2022, *M. Giardini* (FI). – Casual alien species new for the flora of Lazio.

In Sant'Angelo Romano, at least three luxuriant individuals grow spontaneously on a limestone wall, probably originated from specimens cultivated in the balconies above. Similarly, it is possible to explain the presence of *Sedum palmeri* S.Watson and *Aloë maculata* All. subsp. *maculata* in the same site.

M. Giardini

***Hertia cheirifolia* (L.) Kuntze (Asteraceae)**

+ (CAS) **ITALIA** (**LOM**): Bergamo (Bergamo), Via San Martino della Pigrizia, muro sul lato NW (WGS84: 45.702992°N, 9.648287°E), muro, 331 m, SE, 27 February 2022, *E. Banfi* (FI, MSNM barcode MSNM51577). – Casual alien species new for the flora of Italy (Lombardia).

A description of the plant is given by Iamonico and El Mokni (2021) along with the species' typification. It is native to Algeria and Tunisia and, since a few decades, it is the object of floricultural trade at least in Bergamo, where attempts at cultivation in flowerbeds in the Lower City have not had the same success as the plant growing spontaneously on the wall of the Upper City (Luca Mangili, pers. comm.).

E.Banfi, G. Galasso

***Honorius nutans* (L.) Gray (Asparagaceae)**

+ (CAS) **TOS**: Cavriglia (Arezzo), lungo strada SP408 di Montevarchi tra C. Olivacci e Tribolino (WGS84: 43.509780°N, 11.481830°E), margine di querceto ceduo, 100 m, 26 March 2022, *L. Pinzani* (FI, *Herb. L. Pinzani*). – Casual alien species confirmed for the flora of Toscana.

Honorius nutans was last reported in Toscana by Baroni (1908). At the site, this species forms a small population consisting of 20 mature individuals.

L. Pinzani

***Hydrangea macrophylla* (Thunb.) Ser. (Hydrangeaceae)**

+ (NAT) **VEN**. – Status change from casual to naturalized alien for the flora of Veneto.

In Veneto *Hydrangea macrophylla* is considered as casual alien in Vicenza province (Masin and Scortegagna 2012; Argenti et al. 2019). A new population was found in 2008 in Sedico (Belluno): fraz. Peron (CFCE: 9838/2), margin of road, 400 m, 7 July 2008, *C. Argenti* (RO, *Herb. C. Argenti*). Subsequent field surveys (up to July 2022) confirmed the occurrence of this population and led to discover further two populations in Borgo Valbelluna (Belluno), fraz. Cordellon and in Gosaldo (Belluno), fraz. Zavat. The species regularly produces abundant flowers and it is able to sustain itself. We consider *H. macrophylla* as naturalized in Veneto.

D. Iamonico, C. Argenti

***Juglans nigra* L. (Juglandaceae)**

+ (CAS) **MAR**: Apecchio (Pesaro e Urbino), fraz. Serravalle di Carda (WGS84: 43.537994°N, 12.503523°E), vegetazione arbustiva su suolo calcareo legata alla dinamica di rinaturalizzazione di un frutteto abbandonato, 680 m, 28 August 2022, leg. *G. Mei, E. Ligato, S. Tassone*, det. *G. Mei* (FI, *Herb. G. Mei*). – Casual alien species new for the flora of Marche.

A couple of young individuals originated from seed, about 30 cm tall, were observed in an uncultivated area occupied by disturbed vegetation dominated by shrubs and lianose plants. Nearby there is a walnut tree, about 10 m tall, residual of an old planting.

G. Mei, S. Tassone, E. Ligato

***Lepidium virginicum* L. subsp. *virginicum* (Brassicaceae)**

+ (NAT) **SAR**: Palau (Nord-Est Sardegna), loc. Porto Pollo (WGS84: 41.189607°N, 9.321279°E), duna fissa con *Ephedra distachya* e *Armeria pungens*, presente in una vasta area del sistema dunale e lungo le cunette stradali, 23 m, 2 June 2022, *G. Brundu, V. Lozano* (FI, *Herb. UniSS-Agraria*). – Naturalized alien species new for the flora of Sardegna.

This species was observed also on the eastern coast of Sardegna, in a dusty parking area (WGS84: 40.479964°N, 9.808424°E).

G. Brundu, V. Lozano

***Ligustrum lucidum* W.T.Aiton (Oleaceae)**

+ (INV) **LAZ**. – Status change from naturalized to invasive alien for the flora of Lazio.

In recent years, the rapid colonization by *Ligustrum lucidum* from seeds has been observed in several sites in the Rome metropolitan area (e.g., WGS84: 41.914809°N, 12.471324°E; 41.919734°N, 12.474257°E), particularly along the river Tevere, on monuments and in archaeological sites (Celesti-Grapow and Ricotta 2020).

L. Celesti-Grapow, F. Emili

+ (CAS) **BAS**: Potenza (Potenza), Fiume Basento (WGS84: 40.628475°N, 15.808076°E), lungo le sponde, 665 m, 25 June 2022, leg. *L. Rosati*, det. *L. Rosati, G. Potenza, S. Fascetti* (FI, HLUC No. 13881). – Casual alien species new for the flora of Basilicata.

Several flowering individuals were observed within the patches of a *Salix alba* L. riparian forest.

G. Potenza, L. Rosati, S. Fascetti

***Lobelia erinus* L. (Campanulaceae)**

+ (CAS) **SAR**: Villanovaforru (Sud Sardegna), ambiente urbano (WGS84: 39.632595°N, 8.865828°E), crepe dei muri e marciapiedi, 328 m, 8 June 2022, *F. Mascia, L. Podda, G. Bacchetta* (FI, CAG). – Casual alien species new for the flora of Sardegna.

Some individuals were found inside the village.

F. Mascia, L. Podda, G. Bacchetta

***Magnolia grandiflora* L. (Magnoliaceae)**

+ (CAS) **LOM**: Gardone Riviera (Brescia), Piazza P. Scarpetta, di fronte al municipio (WGS84: 45.621831°N, 10.561928°E), aiuola, 116 m, no exp., 15 April 2022, leg. et det. *M. Merli*, conf. *G. Galasso* (FI). – Casual alien species new for the flora of Lombardia.

M. Merli, G. Galasso

***Melia azedarach* L. (Meliaceae)**

+ (CAS) **LOM**: Milano (Milano), Parco del Ticinello (WGS84: 45.421100°N, 9.182687°E), boschina spontanea, 107 m, no exp., 15 June 2022, *G. Galasso* (FI, MSNM barcode MSNM51916, MSNM51917). – Casual alien species new for the flora of Lombardia.

G. Galasso

***Mesembryanthemum ×vascosilvae* (Gideon F.Sm., E.Laguna, Verloove & P.P.Ferrer) L.Sáez & Aymerich (Aizoaceae)**

+ (CAS) **CAM**: Positano (Salerno), arcipelago de Li Galli, Isola del Gallo Lungo (WGS84: 40.582144°N, 15.443412°E), margini della pineta su rupi calcaree

marittime, ca. 20 m, 30 June 2022, *E. Del Guacchio, R. Vallariello, L. Paino, C. Guidone* (FI). – Casual alien nothospecies new for the flora of Campania.

Massively planted as ground cover along paths on this islet and escaped. Formally described only in recent times (Smith et al. 2020, sub *Aptenia*), this overlooked hybrid is widely cultivated throughout Italy, nowadays more than its parental *Mesembryanthemum cordifolium* L.f. The repeated indications for Campania of the latter species (Capri Island) (Del Guacchio and La Valva 2017) need to be verified.

E. Del Guacchio, R. Vallariello, G. Galasso

Narcissus Jonquilla and Apodanthus Daffodil Group (Division 7) (Amaryllidaceae)

+ (CAS) **VEN**: San Giovanni Ilarione (Verona), loc. Castello, a S della chiesa di San Giovanni Battista (WGS84: 45.52671016°N, 11.23706344°E), argine boscato, una decina di cespi, 295 m, 7 March 2022, leg. *F. Menini*, det. *E. Banfi* (FI, VER No. SA926). – Casual alien cultivar group new for the flora of Veneto.

The collected plants showed the characteristics of the cultivar 'Sweetness'.

F. Menini, E. Banfi, G. Galasso

***Oenothera speciosa* Nutt. (Onagraceae)**

+ (CAS) **SAR**: Masainas (Sud Sardegna), loc. Sa Reina (WGS84: 39.044167°N, 8.623333°E), incolti, 38 m, 29 April 2021, *A. Pisano, G. Bacchetta, A. Lallai* (FI, CAG). – Casual alien species new for the flora of Sardegna.

Some specimens have been found growing in the pastures near houses.

A. Pisano, G. Bacchetta, A. Lallai

***Oxalis purpurea* L. (Oxalidaceae)**

+ (CAS) **CAL**: Palmi (Reggio Calabria), Contrada Sant'Elia (WGS84: 38.332833°N, 15.839583°E), bordo sentiero in terra battuta, 550 m, 14 April 2022, leg. *G. Posillipo*, det. *V.L.A. Laface, C.M. Musarella, G. Posillipo, G. Spampinato* (FI, REGGIO). – Casual alien species new for the flora of Calabria.

The very small observed population occupies an area of approximately 5 m^2. In addition to Sicilia, it is naturalized in Campania, but only within the Portici Botanical Garden (Stinca and Motti 2009).

V.L.A. Laface, C.M. Musarella, G. Posillipo

***Pachysandra terminalis* Siebold & Zucc. (Buxaceae)**

+ (CAS) **VEN**: Verona (Verona), Borgo Trento, Via IV Novembre lungo il marciapiede (WGS84: 45.44454303°N, 10.98968109°E), interstizio alla base del muro di un'abitazione, frammista a *Parietaria judaica*, 60 m, 21 March 2022, *F. Menini* (FI). – Casual alien species new for the flora of Veneto.

F. Menini, S. Andreatta

Parthenocissus inserta (A.Kern.) Fritsch (Vitaceae)

+ (INV) **TOS**. – Status change from casual to invasive alien for the flora of Toscana.

On the ancient wall of the city of Pisa we found many plants covering a large area [sulle mura nei pressi della Torre Piezometrica (WGS84: 43.72034°N, 10.40914°E), invasiva sulle mura, 25 m, 21 May 2022, *F. Roma-Marzio 1798* (PI No. 061324)]. Many plants were also observed along the railroad tracks about 5 km from the railway station of Pisa in the direction of Firenze. Furthermore, after a revision of the specimens preserved in PI, it is also reported in the Regional Park of Migliarino-San Rossore-Massaciuccoli [Pisa (Pisa), Parco di Migliarino-San Rossore-Massaciuccoli, Tenuta di Tombolo al Bosco dell'Ulivo (WGS84: 43.60451°N, 10.35298°E), ambienti salmastri e sinantropici, 0–5 m, 9 June 2018, *Partecipanti all'escursione Wikiplantbase #Migliarino-San Rossore-Massaciuccoli* (PI No. 021484)]. In our opinion, most of the regional data concerning *Parthenocissus quinquefolia* (L.) Planch. (Peruzzi and Bedini 2013 [onwards]; Roma-Marzio et al. 2016) could be referred to *P. inserta*. Accordingly, we consider the status of invasive species as more appropriate for *P. inserta* in Toscana.

F. Roma-Marzio

Paspalum dasypleurum Kunze ex É.Desv. (Poaceae)

+ (NAT) **LOM**. – Status change from casual to naturalized alien for the flora of Lombardia.

Abundant and frequent in Bergamo, Via Ghisleni Mazzola [(WGS84: 45.699891°N, 9.646808°E), margine erboso, 262 m, no exp., 23 July 2022, *E. Banfi* (FI, MSNM barcode MSNM52003, MSNM52004, MSNM52005)].

E. Banfi, G. Galasso

Phlox caespitosa Nutt. (Polemoniaceae)

+ (CAS) **ITALIA** (**ABR**): L'Aquila (L'Aquila), loc. Palombara (WGS84: 42.342290°N, 13.429072°E), margine stradale, 666 m, 13 April 2020, leg. *F. Bartolucci*, det. *F. Bartolucci, F. Conti* (FI, APP No. 66130). – Casual alien species new for the flora of Italy (Abruzzo).

The collected specimen was identified following Wherry (1955) and Brown (2000). A few plants have been observed from 2019 to today, growing spontaneously along the roadside.

F. Bartolucci, F. Conti

Phyllostachys viridis (R.A.Young) McClure (Poaceae)

+ (NAT) **LOM**. – Status change from casual to naturalized alien for the flora of Lombardia.

In several small woods in Milano [Boscoincittà (WGS84: 45.482703°N, 9.094525°E), robinieto, 131 m, no exp., 2 June 2022, leg. *G. Galasso*, det. *E. Banfi*

& G. Galasso (MSNM barcode MSNM51900, MSNM51901, MSNM51902, MSNM51903, MSNM51904); Parco del Ticinello, lungo la Roggia Ticinello, pressi di Cascina Campazzino (WGS84: 45.419655°N, 9.187769°E), boschetto su sponda di roggia, 108 m, no exp., 15 June 2022, leg. *G. Galasso*, det. *E. Banfi & G. Galasso* (MSNM barcode MSNM51918)] and Bergamo [Via San Sebastiano, lato a monte (WGS84: 45.710874°N, 9.635844°E), pendio erboso stradale, 380 m, NW, 17 June 2022, *E. Banfi* (MSNM barcode MSNM51922); Via Castagneta, lato a monte (WGS84: 45.718273°N, 9.656700°E), margine erboso stradale, 290 m, NE, 24 June 2022, *E. Banfi* (MSNM barcode MSNM51923)], crop residues expand widely within the undergrowth or along the edges.

E. Banfi, G. Galasso

***Picea orientalis* (L.) Peterm. (Pinaceae)**

+ (CAS) **PIE**: Torino (Torino), Collina di Torino, versante N presso il Colle della Maddalena (WGS84: 45.030659°N, 7.717236°E), bosco misto di latifoglie in prossimità di un piccolo nucleo artificiale di *Picea orientalis*, 658 m, 21 January 2022, *M. Lonati, G. Nota, D. Barberis* (FI). – Casual alien species new for the flora of Piemonte.

Numerous seedlings are present at this site below the canopy of broadleaf trees. Indeed, this species is markedly shade-tolerant in its juvenile stages.

M. Lonati, G. Nota, D. Barberis

***Platycladus orientalis* (L.) Franco (Cupressaceae)**

+ (NAT) **ABR**. – Status change from casual to naturalized alien for the flora of Abruzzo.

Abundant, sexually reproducing individuals were found on the vertical walls of the Spanish Fort, in the urban area of L'Aquila [(WGS84: 42.354040°N, 13.403478°E), muri, 730 m, 18 June 2022, *E. Fanfarillo, L. de Simone* (SIENA)].

E. Fanfarillo, L. de Simone

***Pseudotsuga menziesii* (Mirb.) Franco (Pinaceae)**

+ (CAS) **PIE**: Valchiusa (Torino), Meugliano, Lago di Meugliano (WGS84: 45.475756°N, 7.791080°E), aree boscate in prossimità di un rimboschimento artificiale a *Pseudotsuga menziesii*, 748 m, 16 May 2022, *S. Ravetto Enri, A. Mainetti, M. Pittarello* (FI). – Casual alien species new for the flora of Piemonte.

The spontaneous reproduction of this species has been observed in many Italian administrative regions in recent (Bartolucci et al. 2019) and former (Ciancio et al. 1981) times. In Piemonte, several young individuals (less than 1-m high) have been observed under the canopy cover of a plantation established in the 1930s.

S. Ravetto Enri, A. Mainetti, M. Pittarello

***Quercus palustris* Münchh. (Fagaceae)**

+ (NAT) **ITALIA** (**LOM**). – Status change from casual to naturalized alien for the flora of Italy (Lombardia).

Having had the opportunity to easily access the area of the former Piazza d'Armi in Milano, it was possible to verify that the population of *Quercus palustris* (Galasso et al. 2021) occurring there can be considered naturalized.

G. Galasso

***Sarcococca confusa* Sealy (Buxaceae)**

+ (CAS) **ITALIA** (**ABR**): Teramo (Teramo), Via dei Tribunali, fioriere sul bordo stradale, in zona ombrosa (WGS84: 42.658055°N, 13.708008°E), ca. 260 m, 10 November 2021, *N. Olivieri* (FI). – Casual alien species new for the flora of Italy (Abruzzo).

Sarcococca confusa is quite widespread in cultivation as ornamental in shady areas. Some young plants were identified according to McKean (2011).

N. Olivieri

***Senecio angulatus* L.f. (Asteraceae)**

+ (NAT) **MOL**: Termoli (Termoli), Via Corsica in prossimità dell'incrocio con Via Sant'Elena (WGS84: 41.991205°N, 14.999781°E), incolto sul bordo strada, 31 m, 4 January 2022, *M. Lonati, M. Probo* (FI). – Naturalized alien species new for the flora of Molise.

This species is widespread in Termoli, also occurring in some uncultivated areas near the medieval village.

M. Lonati, M. Probo

***Setaria adhaerens* (Forssk.) Chiov. (Poaceae)**

+ (NAT) **VEN**: Venezia (Venezia), Isola di Sant'Erasmo, 50 m a NE della chiesa (WGS84: 45.459477°N, 12.410954°E), orto, 0 m, 31 October 2021, *S. Tasinazzo* (FI); *ibidem*, Lido (WGS84: 45.364906°N, 12.337115°E), orto, 0 m, 14 October 2022, *S. Tasinazzo* (*Herb. S. Tasinazzo*); Cavallino-Treporti (Venezia), Via Sette Casoni (WGS84: 45.466540°N, 12.503309°E), campo di asparagi in stadio post-colturale, 0 m, 6 November 2021, *S. Tasinazzo* (*Herb. S. Tasinazzo*). – Naturalized alien species new for the flora of Veneto.

Some specimens were found on sandy soil.

S. Tasinazzo

***Sisyrinchium rosulatum* E.P.Bicknell (Iridaceae)**

+ (NAT) **TOS**: Lucca (Lucca) (WGS84: 43.8457678°N, 10.5153513°E), prati umidi, 14 m, 13 May 2022, *S. Maccherini, L. de Simone, E. Fanfarillo* (FI, SIENA). – Naturalized alien species new for the flora of Toscana.

Numerous fructifying adult individuals were found in an urban mowed grassland dominated by *Agrostis stolonifera* L. subsp. *stolonifera* and *Lolium perenne* L.

S. Maccherini, L. de Simone, G. Bacaro

***Solanum carolinense* L. (Solanaceae)**

+ (NAT) **LAZ**. – Status change from casual to naturalized alien for the flora of Lazio.

In Lazio, this species was first recorded in Roma in 2015 as a casual alien (Olivieri 2015). The new populations [Fumone (Frosinone), Vicinale Pozzi (WGS84: 41.73029511°N, 13.26961270°E), margine stradale, 621 m, 8 August 2022, *E. Fanfarillo* (SIENA); Alatri (Frosinone), strada SR155 (WGS84: 41.736187°N, 13.344255°E), 416 m, 9 August 2022, *E. Fanfarillo* (SIENA)] appear well-established, especially the one in Alatri, which was also observed in the past two years.

E. Fanfarillo

***Solanum sisymbriifolium* Lam. (Solanaceae)**

+ (NAT) **CAL**: Crotone (Crotone), lungo la strada SS106, in loc. Passovecchio, nei pressi della cartiera (WGS84: 39.106411°N, 17.097683°E), formazioni prative ruderali, 7 m, 28 September 2021, leg. *G De Fine*, det. *N.G. Passalacqua* (FI). – Naturalized alien species new for the flora of Calabria.

N.G. Passalacqua, G. De Fine

***Toxicodendron radicans* (L.) Kuntze subsp. *radicans* (Anacardiaceae)**

+ (NAT) **ITALIA** (**TOS**): Impruneta (Firenze), ai Sassi Neri nei pressi della fonte della Caldaia, lungo il fosso di Narbi (WGS84: 43.683644°N, 11.271573°E), bosco mesofilo e ambienti rocciosi umidi su serpentino, 230 m, 15 June 2022, leg. *G. Astuti, A. Cutroneo, F. Roma-Marzio, R. Vangelisti*, det. *F. Roma-Marzio, G. Astuti* (FI, PI Nos. 061456, 061458). – Status change from casual to naturalized alien for the flora of Italy; naturalized alien species new for the flora of Toscana.

In Italy, this species is reported as casual alien only in Trentino-Alto Adige (Galasso et al. 2018), based on two old records by Gelmi (1893) and Biasioni (1930). Accordingly, the Tuscan population is the only recent record for Italy and the first case reported as naturalized species. Special attention is recommended with this species, commonly known as poison ivy, which in North America is causing serious allergic contact dermatitis to millions of people every year (Kim et al. 2019).

G. Astuti, F. Roma-Marzio, R. Vangelisti

***Trigonella foenum-graecum* L. (Fabaceae)**

+ (NAT) **SAR**. – Status change from casual to naturalized alien for the flora of Sardegna.

The species was frequently found in marginal segetal habitats (fields of cereal crops, such as barley and oats) and in arid meadows of therophyte communities, mainly on

sandy-clayey substrates (Baràdili, Oristano; Collinas and Villanovaforru, Sud Sardegna). The populations are clearly established since some time in the territories and are to be related to intentional (cultivation of fenugreek for zootechnical purposes) or unintentional (cereal seed contamination) historical introductions.

F. Mascia, G. Bacchetta, M. Fois

***Triticum ×requienii* Ces., Pass. & Gibelli nothosubsp. *requienii* (Poaceae)**

+ (CAS) **TOS**: Asciano (Siena), loc. Biancane di Leonina (WGS84: 43.295584°N, 11.452733°E), calanchi, 225 m, 31 May 2022, leg. et det. *L. Pinzani, A. Stinca*, conf. *E. Banfi* (FI, IT, *Herb. L. Pinzani*). – Casual alien nothospecies new for the flora of Toscana.

Triticum ×requienii was first reported for Italy by Raimondo et al. (2010), under the name ×*Aegilotriticum triticoides* van Slageren, in Sicilia, then by Ardenghi and Polani (2016) in Lombardia. In Asciano, a few individuals of this nothotaxon have been observed within the therophytic plant communities of the clay flows at the base of the gullies (locally called 'Biancane').

L. Pinzani, A. Stinca, E. Banfi

***Tulipa gesneriana* L. subsp. *gesneriana* (Liliaceae)**

+ (CAS) **TOS**: Bagno a Ripoli (Firenze), loc. Candeli, tra Lasi e La Massa (WGS84: 43.764465°N, 11.340489°E), oliveto, 72 m, 16 April 2022, *L. Pinzani* (FI). – Casual alien species confirmed for the flora of Toscana.

This species forms a population consisting of a few scattered flowering individuals, distributed within an olive grove.

L. Pinzani

***Wisteria sinensis* (Sims) DC. (Fabaceae)**

+ (NAT) **PIE**: Gifflenga (Biella), sponde del Torrente Cervo, a monte del guado tra Gifflenga e Buronzo (WGS84: 45.49035°N, 8.24381°E), vegetazione alloctona sulle sponde e greto del Torrente Cervo, 176 m, 3 October 2021, *A. Selvaggi* (FI, *Herb. A. Selvaggi*); Carignano (Torino), sponda sinistra Fiume Po, presso imbarco Società canottieri Padus (WGS84: 44.90794°N, 7.69109°E), vegetazione alloctona sulle sponde del Fiume Po, 230 m, 17 July 2022, *A. Selvaggi* (FI, *Herb. A. Selvaggi*). – Naturalized alien species confirmed for the flora of Piemonte.

Previously recorded in Piemonte only in "Vignole Borbera, in luogo abbandonato" (Carrega and Silla 1995) and in the Natural Reserve of "Garzaia di Valenza" (Ostellino 1987), without any indication of the degree of naturalization. A couple of specimens escaped from cultivation have been also reported on the outskirts of Cherasco (Cuneo) (Rota and Cavallo 2012).

A. Selvaggi

***Yucca gloriosa* L. (Asparagaceae)**

+ (NAT) **SAR.** – Status change from casual to naturalized alien for the flora of Sardegna.

A dense population originating from clonal growth and formed by several shrubs was found in Porto Torres (Sassari), close to the Rio Mannu estuary (WGS84: 40.835207N, 8.391014E). Other small naturalized populations were found on sand dunes at Is Arenas [San Vero Milis (Oristano), WGS84: 40.059102°N, 8.466568°E] and in coastal areas of the island of San Pietro [e.g., Carloforte (Sud Sardegna), spiaggia La Caletta, WGS84: 39.117101°N, 8.257647°E].

G. Rivieccio, G. Brundu, S. Bagella

Nomenclatural and distribution updates from other literature sources

Nomenclatural, status, and distribution updates, and corrections to Galasso et al. (2018) and subsequent updates summarised in the Portal to the Flora of Italy (2022) are provided in Suppl. material 1.

G. Galasso, F. Bartolucci

Acknowledgements

We gratefully acknowledge Lorenzo Peruzzi, who provided distribution information.

References

Arango Gaviria J, Echeverri Zuluaga J, Lopez Herrera A (2019) Diversity kikuyu grass (*Cenchrus clandestinus*): a review. Respuestas 24(2): 82–90. https://doi.org/10.22463/0122820X.1834

Ardenghi NMG, Polani F (2016) La flora della provincia di Pavia (Lombardia, Italia settentrionale). 1. L'Oltrepò Pavese. Natural History Sciences 3(2): 51–79. https://doi.org/10.4081/nhs.2016.269

Argenti C, Masin R, Pellegrini B, Perazza G, Prosser F, Scortegagna S, Tasinazzo S (2019) Flora del Veneto dalle Dolomiti alla laguna veneziana, Vols 1–2. Cierre edizioni, Sommacampagna, Verona.

Baroni E (1908) Supplemento generale al Prodromo della Flora Toscana di T. Caruel. Fascicolo VI ed ultimo. Società Botanica Italiana, Firenze.

Bartolucci F, Cancellieri L, Conti F, Banfi E, Bouvet D, Celestini M, Ciaschetti G, Di Pietro R, Falcinelli F, Fascetti S, Galasso G, Lattanzi E, Masin RR, Pennesi R, Rosati L, Stinca A, Tilia A, Forte TGW, Scoppola A (2019) Contribution to the floristic knowledge of Velino and Aterno valleys (Lazio-Abruzzo, central Italy). Italian Botanist 7: 93–100. https://doi.org/10.3897/italianbotanist.7.34697

Biasioni L (1930) Notazioni intorno a piante del nostro paese. Studi Trentini di Scienze Naturali 11(2): 129–166.

Britton N, Brown A (1913) An illustrated flora of the northern United States, Canada and the British possessions. Ed. 2, Vol. 3. Charles Scribner's Sons, New York.

Brown N (2000) *Phlox* Linnaeus. In: Cullen J, Alexander JCM, Brickell CD, Edmondson JR, Green PS, Heywood VH, Jørgensen P-M, Jury SL, Knees SG, Maxwell HS, Miller DM, Robson NKB, Walters SM, Yeo PF (Eds) The European garden flora, a manual for the identification of plants cultivated in Europe, both out-of-doors and under glass, Vol. 6. Cambridge University Press, Cambridge, 104–109.

Carrega M, Silla D (1995) Ricerche floristiche nel Novese e nel Tortonese (provincia di Alessandria, Piemonte sud orientale). Parte I: Lycopodiaceae–Araliaceae. Rivista Piemontese di Storia Naturale 16: 17–76.

Celesti-Grapow L, Ricotta C (2021) Plant invasion as an emerging challenge for the conservation of heritage sites: the spread of ornamental trees on ancient monuments in Rome, Italy. Biological Invasions 23(4): 1191–1206. https://doi.org/10.1007/s10530-020-02429-9

Ciancio O, Mercurio R, Nocentini S [Eds] (1981) Le specie forestali esotiche nella selvicoltura italiana. Annali dell'Istituto Sperimentale per la Selvicoltura 12–13: 1–731.

Del Guacchio E, La Valva V (2017) The non-native vascular flora of Campania (southern Italy). Plant Biosystems 152(4): 767–779. https://doi.org/10.1080/11263504.2017.1338626

Fraser D, Sharp P, Ahmad N, Morris B, Trethowan R (2017) Abiotic stress tolerance of kikuyu (*Cenchrus clandestinus*) and some related grasses and potential of kikuyu for agricultural and urban environments. Crop and Pasture Science 68(3): 285–296. https://doi.org/10.1071/CP15380

Galasso G, Conti F, Peruzzi L, Ardenghi NMG, Banfi E, Celesti-Grapow L, Albano A, Alessandrini A, Bacchetta G, Ballelli S, Bandini Mazzanti M, Barberis G, Bernardo L, Blasi C, Bouvet D, Bovio M, Cecchi L, Del Guacchio E, Domina G, Fascetti S, Gallo L, Gubellini L, Guiggi A, Iamonico D, Iberite M, Jiménez-Mejías P, Lattanzi E, Marchetti D, Martinetto E, Masin RR, Medagli P, Passalacqua NG, Peccenini S, Pennesi R, Pierini B, Podda L, Poldini L, Prosser F, Raimondo FM, Roma-Marzio F, Rosati L, Santangelo A, Scoppola A, Scortegagna S, Selvaggi A, Selvi F, Soldano A, Stinca A, Wagensommer RP, Wilhalm T, Bartolucci F (2018) An updated checklist of the vascular flora alien to Italy. Plant Biosystems 152(3): 556–592. https://doi.org/10.1080/11263504.2018.1441197

Galasso G, Domina G, Angiolini C, Bacchetta G, Banfi E, Barberis D, Bardi S, Bartolucci F, Bonari G, Bovio M, Briozzo I, Brundu G, Buono S, Calvia G, Celesti-Grapow L, Cozzolino A, Cuena-Lombraña A, Curuzzi M, D'Amico FS, Dagnino D, De Fine G, Fanfarillo E, Federici A, Ferraris P, Fiacchini D, Fiaschi T, Fois M, Gubellini L, Guidotti E, Hofmann N, Kindermann E, Laface VLA, Lallai A, Lanfredini P, Lazzaro L, Lazzeri V, Lonati M, Loreti M, Lozano V, Magrini S, Mainetti A, Marchini M, Marignani M, Martignoni M, Mei G, Minutillo F, Mondino GP, Motti R, Musarella CM, Nota G, Olivieri N, Pallanza M, Passalacqua NG, Patera G, Pilon N, Pinzani L, Pittarello M, Podda L, Probo M, Ravetto Enri S, Rosati L, Salerno P, Selvaggi A, Soldano A, Sotgiu Cocco S, Spampinato G, Stinca A, Terzi M, Tondi G, Turcato C, Wellstein C, Lastrucci L (2021) Notulae to the Italian alien vascular flora: 12. Italian Botanist 12: 105–121. https://doi.org/10.3897/italianbotanist.12.78010

Gelmi E (1893) Prospetto della flora trentina. Scotoni e Vitti ed., Trento. https://doi.org/10.5962/bhl.title.9634

Goiran A (1900) Le piante fanerogame dell'agro veronese. Censimento, Vol. 2. G. Franchini, Verona.

Iamonico D, El Mokni R (2021) *Hertia cheirifolia* and *H. maroccana* (Asteraceae), two species endemic to North Africa: nomenclatural notes, morphology, distribution, and IUCN Red List assessments. Collectanea Botanica 40(e009): 1–8. https://doi.org/10.3989/collectbot.2021.v40.009

Kim Y, Flamm A, El Sohly MA, Kaplan DH, Hage RJ, Hamann CP, Marks JG (2019) Poison ivy, oak, and sumac dermatitis: what is known and what is new? Dermatitis 30(3): 183–190. https://doi.org/10.1097/DER.0000000000000472

Maire R (1952) Flore de l'Afrique du Nord, Vol. 1. Paul Lechevalier Èditeur, Paris.

Masin R, Scortegagna S (2012) Flora alloctona del Veneto centro-meridionale (province di Padova, Rovigo, Venezia e Vicenza - Veneto - NE Italia). Natura Vicentina 15[2011]: 5–54.

McKean DR (2011) *Sarcococca* Lindley. In: Cullen J, Knees SG, Cubey HS (Eds) The European garden flora, a manual for the identification of plants cultivated in Europe, both out-of-doors and under glass. Ed. 2, Vol 4. Cambridge University Press, Cambridge, 30–32.

Olivieri N (2015) Notulae: 310–312. In: Galasso G, Nepi C, Domina G, Peruzzi L (Eds) Notulae alla flora esotica d'Italia 13 (288–313). Informatore Botanico Italiano 47(2): 239–240.

Ostellino I (1987) Flora della riserva naturale Garzaia di Valenza (Piemonte, Alessandria). Rivista Piemontese di Storia Naturale 8: 123–136.

Peruzzi L, Bedini G [Eds] (2013 [onwards]) Wikiplantbase #Toscana. http://bot.biologia.unipi.it/wpb/toscana/index [accessed 31.05.2022]

Portal to the Flora of Italy (2022) Portale della Flora d'Italia/Portal to the Flora of Italy. 2022.1. https://dryades.units.it/floritaly/ [accessed 17.11.2022]

Puccini G (1950) Naturalizzazione e riproduzione spontanea di piante ornamentali nella Liguria occidentale. Nuovo Giornale Botanico Italiano, n.s. 57(1–2): 23–33. https://doi.org/10.1080/11263505009430780

Puddu S, Podda L, Mayoral O, Delage A, Hugot L, Petit Y, Bacchetta G (2016) Comparative analysis of the alien vascular flora of Sardinia and Corsica. Notulae Botanicae Horti Agrobotanici Cluj-Napoca 44(2): 337–346. https://doi.org/10.15835/nbha44210491

Raimondo FM, Domina G, Spadaro V (2010) Checklist of the vascular flora of Sicily. Quaderni di Botanica Ambientale e Applicata 21: 189–252.

Roma-Marzio F, Bedini G, Müller JV, Peruzzi L (2016) A critical checklist of the woody flora of Tuscany (Italy). Phytotaxa 287(1): 1–135. https://doi.org/10.11646/phytotaxa.287.1.1

Rota F, Cavallo O (2012) La flora vascolare spontanea del territorio di Cherasco (CN, Piemonte) fra Tanaro e Stura: aggiornamento e compendio. Rivista Piemontese di Storia Naturale 33: 13–110.

Smith GF, Laguna E, Verloove F, Ferrer-Gallego PP (2020) *Aptenia* ×*vascosilvae* (*A. cordifolia* × *A. haeckeliana*) (Aizoaceae), the new nothospecies from which the horticulturally popular cultivar *Aptenia* 'Red Apple' was derived. Phytotaxa 441(2): 221–224. https://www.biotaxa.org/Phytotaxa/article/view/phytotaxa.441.2.10

Stinca A, Motti R (2009) The vascular flora of the Royal Park of Portici (Naples, Italy). Webbia 64(2): 235–266. https://doi.org/10.1080/00837792.2009.10670861

Wherry ET (1955) The genus *Phlox*. Associates of the Morris Arboretum, Philadelphia.

Wipff JK (2003) *Pennisetum* Rich. In: Flora of North America Editorial Committee (Ed.) Flora of North America north of Mexico, Vol. 25. Oxford University Press, New York, Oxford, 515–529.

Zhekun Z, Gilbert MG (2003) Moraceae. In: Wu ZY, Raven PH, Hong DY (Eds) Flora of China, Vol. 5. Science Press, Beijing, Missouri Botanical Garden Press, St. Louis, 21–73.

Supplementary material 1

Supplementary data

Authors: Gabriele Galasso, Fabrizio Bartolucci

Data type: Species data

Explanation note: 1. Nomenclatural updates; 2. Note updates; 3. Distribution updates; 4. Synonyms, misapplied or included names.

Copyright notice: This dataset is made available under the Open Database License (http://opendatacommons.org/licenses/odbl/1.0/). The Open Database License (ODbL) is a license agreement intended to allow users to freely share, modify, and use this Dataset while maintaining this same freedom for others, provided that the original source and author(s) are credited.

Link: https://doi.org/10.3897/italianbotanist.14.97758.suppl1